

8                wherein the lean NOx catalyst is disposed upstream of the oxidation  
9 catalyst and wherein the platinum is present in the lean NOx catalyst at a loading  
10 of  $\leq 30\text{g/ft}^3$ .

1                10. (Newly Added) An engine according to claim 9, wherein the  
2 lean NOx catalyst has an activity sufficient to provide a ratio of % NOx conversion  
3 to % hydrocarbon conversion of at least 0.2 as measured at a temperature of  
4  $230^\circ\text{C}$ , a space velocity of  $25000\text{hr}^{-1}$  and a hydrocarbon:NOx input ratio of 3:1  
5 counting the hydrocarbon as equivalent propane.

b1 1                11. (Newly Added) An engine according to claim 9, wherein the  
2 oxidation catalyst has an activity sufficient to provide a % hydrocarbon conversion  
3 of greater than 80% and a % carbon monoxide conversion of greater than 70% as  
4 measured at a temperature of  $230^\circ\text{C}$ , a space velocity of  $25000\text{hr}^{-1}$  and a  
5 hydrocarbon:NOx input ratio of 3:1 counting the hydrocarbon as equivalent  
6 propane.

1                12. (Newly Added) An engine according to claim 9, wherein the  
2 lean NOx catalyst further comprises an alkaline earth metal.

1                13. (Newly Added) An engine according to claim 9, wherein the  
2 oxidation catalyst further comprises a base metal.

1                14. (Newly Added) An engine according to claim 9, wherein the  
2 oxidation catalyst PGM is platinum.

1                15. (Newly Added) An engine according to claim 9, wherein the  
2 oxidation catalyst PGM loading is about  $100\text{g/ft}^3$ .

1                16. (Newly Added) An engine according to claim 9, wherein the  
2 oxidation catalyst or the lean NOx catalyst further comprise alumina, a zeolite,  
3 ceria or zirconia.

1 17. (Newly Added) An engine according to claim 9, wherein the  
2 volume of a substrate coated with the lean NOx catalyst is at least 150% that of the  
3 oxidation catalyst.

1 18. (Newly Added) An engine according to claim 9, wherein the  
2 lean NOx catalyst is coated on two catalyst substrates arranged in parallel.

1 19. (Newly Added) An engine according to claim 9, further  
2 comprising means for injecting hydrocarbon fuel into the exhaust upstream of the  
3 platinum lean NOx catalyst.

1 20. (Newly Added) An engine according to claim 9, wherein the  
2 engine is a diesel engine, a lean burn gasoline engine or a direct injection gasoline  
3 engine.

1 21. (Newly Added) A process for the control of emissions from a  
2 lean-burn internal combustion engine, which process comprising:

3 passing exhaust gases from the engine over a lean NOx catalyst  
4 comprising platinum to reduce NOx to N<sub>2</sub>; and

5 passing the product gases exiting from the lean NOx catalyst over an  
6 oxidation catalyst comprising a platinum group metal (PGM) to oxidize  
7 hydrocarbons and carbon monoxide,

8 wherein the platinum is present in the lean NOx catalyst at a loading  
9 of  $\leq 30\text{g/ft}^3$ .

1 22. (Newly Added) A process according to claim 21, wherein the  
2 lean NOx catalyst has an activity sufficient to provide a ratio of % NOx conversion  
3 to % hydrocarbon conversion of at least 0.2 as measured at a temperature of  
4 230°C, a space velocity of 25000hr<sup>-1</sup> and a hydrocarbon:NOx input ratio of 3:1  
5 counting the hydrocarbon as equivalent propane.

1                   23. (Newly Added) A process according to claim 21, wherein the  
2 oxidation catalyst has an activity sufficient to provide a % hydrocarbon conversion  
3 of greater than 80% and a % carbon monoxide conversion of greater than 70% as  
4 measured at a temperature of 230°C, a space velocity of 25000hr<sup>-1</sup> and a  
5 hydrocarbon:NOx input ratio of 3:1 counting the hydrocarbon as equivalent  
6 propane.

1                   24. (Newly Added) A process according to claim 21, wherein the  
2 lean NOx catalyst further comprises an alkaline earth metal.

1                   25. (Newly Added) A process according to claim 21, wherein the  
2 oxidation catalyst further comprises a base metal.

1                   26. (Newly Added) A process according to claim 21, wherein the  
2 oxidation catalyst PGM is platinum.

1                   27. (Newly Added) A process according to claim 21, wherein the  
2 oxidation catalyst PGM loading is about 100g/ft<sup>3</sup>.

1                   28. (Newly Added) A process according to claim 21, wherein the  
2 oxidation catalyst or the lean NOx catalyst further comprises alumina, a zeolite,  
3 ceria or zirconia.

1                   29. (Newly Added) A process according to claim 21, wherein the  
2 gases are passed over the lean NOx catalyst system at a space velocity below  
3 40000hr<sup>-1</sup>.

1                   30. (Newly Added) A process according to claim 21, wherein the  
2 gases are passed over the oxidation catalyst at a space velocity of 40000-80000hr<sup>-1</sup>.

1                   31. (Newly Added) A process according to claim 21, wherein the  
2 volume of a substrate coated with the lean NOx catalyst is at least 150% that of the  
3 oxidation catalyst.

1 32. (Newly Added) A process according to claim 21, wherein the  
2 lean NO<sub>x</sub> catalyst is coated on two catalyst substrates arranged in parallel.

1 33. (Newly Added) A process according to claim 21 further  
2 comprising introducing additional hydrocarbon fuel into the exhaust gas before the  
3 exhaust gas contacts the lean NO<sub>x</sub> catalyst.

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